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**Abstract**

A process for preparing arrays of heterogeneous catalysts and/or their precursors, made up of a body which has, preferably parallel, through-channels and in which at least  $n$  channels comprise  $n$  different heterogeneous catalysts and/or their precursors, where  $n$  is 2, preferably 10, particularly preferably 100, comprises the following steps:

- a1) preparing solutions, emulsions and/or dispersions of elements and/or element compounds of the chemical elements present in the catalyst and/or catalyst precursor and, if appropriate preparing dispersions of inorganic support materials,
- a2) if appropriate introducing adhesion promoters, binders, viscosity regulators, pH regulators and/or solid inorganic supports into the solutions, emulsions and/or dispersions,
- a3) simultaneously or successively coating the channels of the body with the solutions, emulsions and/or dispersions, a predetermined amount of the solutions, emulsions and/or dispersions being introduced into each channel to obtain a predetermined composition,
- a4) treating and reacting with one or more reactive gases the freshly impregnated moist channels obtained after the coating, and
- a5) if appropriate heating the coated body in the presence or absence of inert gases or reactive gases to a temperature in the range from 20 to 1500°C to dry, with or without sintering or calcining, the catalysts and/or catalyst precursors.